**Practical Assignment: Git File States, Workflow & History (30 Marks)**

**Objective:**

To evaluate students' ability to track file states, manage commits, and explore Git history effectively.

**Instructions:**

* Complete all tasks and submit the Git repository link along with terminal screenshots.
* You need to upload a text file with your name and roll number along with other files.
* Only those assignments will qualify whose last commit is before 12:00 PM. If any commit is found after this time, zero marks will be awarded.

**Task 1: Working with Git – File States, Project Section, Workflow (15 Marks)**

1. Create a new directory for this practical and initialize a Git repository inside it.
2. Create a new file named workflow.txt and add some initial content.
3. Check the status of the repository and note the file's current state.
4. Add the file to the staging area and verify its status.
5. Commit the file with an appropriate message.
6. Modify the file by adding more content and check its status again.
7. Stage the modified file and commit the changes with a new message.
8. Explain the different commit states (untracked, staged, committed) in your README file. Use proper syntax.
9. Capture and submit screenshots showing the file states, commit tracking process, and git status outputs.

**Task 2: Working with Git History (15 Marks)**

1. View the commit history of your repository.
2. Display a compact version of the commit history.
3. Use Git history commands to filter logs based on:
   * Author name
   * Specific time range (e.g., last 24 hours)
   * Commit messages containing specific keywords
4. Explain the importance of Git history in version control and debugging in your README file.
5. Capture and submit screenshots of Git history outputs.

**Submission Guidelines:**

* Upload your repository to your private GitHub account.
* Attach terminal screenshots in a PDF file.
* Ensure all commit messages are meaningful.
* Submit before the deadline.